



30 2/55  
#5

Docket No.: 04754-00043-US  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

AUG 10 2004

Technology Center 2100

In re Patent Application of:  
Stergios V. Anastasiadis et al.

Application No.: 10/054699

Confirmation No.: 5410

Filed: January 22, 2002

Art Unit: N/A

For: STREAMING SERVER

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

A copy of each reference on the PTO/SB/08 is attached.

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent,

Application No.: 10/054699

Docket No.: 04754-00043-US

publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

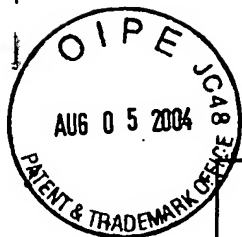
The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 04754-00043-US. A duplicate copy of this paper is enclosed.

Dated: *August 2, 2004*

Respectfully submitted,

By *Patricia S. Rogowski*  
Patricia Smink Rogowski

Registration No.: 33,791  
CONNOLLY BOVE LODGE & HUTZ LLP  
1007 North Orange Street  
P.O. Box 2207  
Wilmington, Delaware 19899  
(302) 658-9141  
(302) 658-5614 (Fax)  
Attorney for Applicant



PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

**Complete if Known**

Application Number	10/054699-Conf. #5410
Filing Date	January 22, 2002
First Named Inventor	Stergios V. Anastasiadis
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	04754-00043-US

**RECEIVED**

AUG 10 2004

Technology Center 2100

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	SHENOY and VIN, Failure Recovery Algorithms for Multimedia Servers, University of Texas at Austin, pp. 1-34 (undated)	
	CB	HASKIN and SCHMUCK, The Tiger Shark File System, IBM Almaden Research Center, IEEE, 1996, pp.226-231	
	CC	BOLOSKY, et al., Distributed Schedule Management in the Tiger Video Fileserver, Microsoft Research, SOSF 97 (undated)	
	CD	ANASTASIADIS, et al., Modular and Efficient Resource Management in the Exedra Media Server, University of Toronto, USfNIX Symp. On Internet Tech., San Francisco, CA March 2001	
	CE	SHENOY and VIN, Efficient Striping Techniques for Multimedia File Servers, University of Texas at Austin, NOSSDAV 97, pp. 25-36 (undated)	
	CF	REDDY and WIJAYARATNE, Techniques for improving the throughput of VBR streams, Texas A & M University, NCN 99 (undated)	
	CG	GAFSI and BIERSECK, Data Striping and Reliability Aspects in Distributed Video Servers, Institut EURECOM, In Cluster Computing, Balzer Pub. (1998), pp. 1-27	
	CH	ÖZDEN, et al., Disk Striping in Video Server Environments, AT&T Bell Laboratories, IEEE, 1996, pp. 580-589	
	CI	CARBREIRA and LONG, Swift: Using Distributed Disk Striping to Provide High I/O Data Rates, Computing Systems 4(4) (Fall 1991), pp. 405-436	
	CJ	ANASTASIADIS, et al., Server-Based Smoothing of Variable Bit-Rate Streams, ACM Int'l Symp. On Multimedia, October 2001 (Ottawa, ON Canada)	
	CK	ANASTASIADIS, et al., Maximizing Throughput in Replicated Disk Striping of Variable Bit-Rate Streams, USfNIX Annual Tech. Conf., Monterey, CA (June 2002)	
	CL	ANASTASIADIS, et al., Disk Striping Scalability in the Exedra Media Server, University of Toronto, SPIE/ACM Multimedia Computing and Networking Conf., San Jose, CA (Jan. 2001)	
	CM	MCMANUS and ROSS, A Dynamic Programming Methodology for Managing Pre-recorded VBR Sources in Packet-Switched Networks, University of Pennsylvania, January 1997, pp. 1-28	
	CN	ZHAO and TRIPATHI, Bandwidth-Efficient Continuous Media Streaming Through Optimal	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--



PTO/SB/08a/b (08-03)  
Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Substitute for form 1449A/B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/054699-Conf. #5410		
		Filing Date	January 22, 2002		
		First Named Inventor	Stergios V. Anastasiadis		
		Art Unit	N/A		
		Examiner Name	Not Yet Assigned		
Sheet	2	of	2	Attorney Docket Number	04754-00043-US

RECEIVED

AUG 10 2004

Technology Center 2100

		Multiplexing (undated)	
CO		SEN, et al., Proxy Prefix Caching for Multimedia Streams, IEEE, 1999, pp. 1310-1319	
CP		SAHU, et al., On the Efficient Retrieval of VBR Video in a Multimedia Server, IEEE, 1997, pp. 46-53	
CQ		BIERSACK and HAMD, Cost-optimal Data Retrieval for Video Servers with Variable Bit Rate Video Streams, NOSSDAV 98 (Cambridge, UK) (undated)	
CR		SALEHI, et al., Supporting Stored Video: Reducing Rate Variability and End-to-End Resource Requirements through Optimal Smoothing, University of Massachusetts, SIGMETRICS 96, 1996, pp. 222-231	
CS		SHENOY, et al., Symphony: An Integrated Multimedia File System, University of Texas, pp. 1-17, Tech. Report TR 97-09 (March 1997)	
CT		SEN, et al., Online Smoothing of Variable-Bit-Rate Streaming Video, IEEE Transactions on Multimedia, v. 2, no. 1 (March 2000)	
CU		MAKAROFF, et al., An Evaluation of VBR Disk Admission Algorithms for Continuous Media File Servers, ACM Multimedia (1997) pp. 145-54	
CV		SANTOS and MUNTZ, Performance Analysis of the RIO Multimedia Storage System with Heterogeneous Disk Configurations, ACM MULTIMEDIA, 1998, pp. 1-6 and 227-238 (1998)	
CW		GRINGERI, et al., Traffic Shaping, Bandwidth Allocation, and Quality Assessment for MPEG Video Distribution over Broadband Networks, IEEE Network, (December 1998)	
CX		LAKSHMAN, et al., VBR Video: Tradeoffs and Potentials, Proceedings of the IEEE, Vol. 86, No. 5, May 1998, pp. 952-973	
CY		MARTIN, et al., The Fellini Multimedia Storage System, Information Sciences Research Center, Journal of Digital Libraries, pp. 1-22 (1997)	
CZ		FLYNN and TETZLAFF, Disk Striping and Block Replication Algorithms for Video File Servers, Proceedings of MULTIMEDIA, IEEE, 1996, pp. 590-597	
CA1		TEWARI, et al., High Availability in Clustered Multimedia Servers, Int'l Conf. on Data Engineering (Feb. 1996) pp. 336-42	
CB1		Ozden, et al., Fault-tolerant Architectures for Continuous Media Servers, ACM SIGMOD (June 1996)	
CC1		TOBAGI, et al., Streaming RAID-A Disk Array Management System For Video Files, ACM Multimedia, 1993, pp. 393-400	
CD1		Mourad, Doubly-Striped Disk Mirroring: Reliable Storage for Video Servers, Multimedia Tools and Applications 2, 1996, pp. 273-297	
CE1		BERSON, et al., Fault Tolerant Design of Multimedia Servers, ACM, 1995, pp. 364-375	
CF1		GRAY and SHENOY, Rules of Thumb in Data Engineering, IEEE International Conference on Data Engineering, 2000	
CG1		BOLOSKY, et al., The Tiger Video Fileserver, NOSSDAV, (April 1996)	
CH1		PATTERSON, et al., A Case for Redundant Arrays of Inexpensive Disks (RAID), University of California (undated)	
CI1		MCVOY and KLEIMAN, Extent-like Performance from a UNIX File System, USENIX, Dallas, TX (Winter 1991), pp. 1-12	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--



PTO/SB/92 (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/054699

Attorney Docket No.: 04754-00043-US

## Certificate of Mailing under 37 CFR 1.8

RECEIVED

AUG 10 2004

Technology Center 2100

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on

8/2/04  
Date



Signature

Valerie J. Murphy

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Information Disclosure Statement  
IDS (Citation) by Applicant (w/ references).